CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

TENTATIVE ADDENDUM NO. 2
TO
ORDER NO. 2000-36
NPDES NO. CA0107395

AN ADDENDUM TO ALLOW DISCHARGES FROM THE CARLSBAD WATER RECYCLING FACILITY THROUGH THE ENCINA OCEAN OUTFALL

ENCINA WASTEWATER AUTHORITY

DISCHARGE TO THE PACIFIC OCEAN
THROUGH THE ENCINA OCEAN OUTFALL

SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. The Encina Wastewater Authority (EWA) is authorized to discharge up to 38 million gallons per day (MGD) of secondarily-treated wastewater effluent to the Pacific Ocean through the Encina Ocean Outfall (EOO). EWA is subject to waste discharge requirements contained in Order No. 2000-36 (NPDES Permit No. CA0107395), which was adopted by the Regional Board on April 12, 2000.

2. On December 12, 2001, this Regional Board adopted Order No. 2001-352, *Master Reclamation Permit with Waste Discharge Requirements for the Production and Purveyance of Recycled Water for Carlsbad Municipal Water District, Carlsbad Water Recycling Facility (CWRF), San Diego County*. When completed, CWRF will divert secondary effluent from the Encina Water Pollution Control Facility (EWPCF) for tertiary treatment. CWRF will produce up to 4 million gallons per day of tertiary effluent for water reclamation. Finding No. 15 of Order No. 2001-352 states that CWRF has authorization from EWA for the discharge of effluent that exceeds the storage capacity at CWRF through the EOO.

3. On March 4, 2003, this Regional Board received a Report of Waste Discharge (RWD) submitted by EWA requesting modifications to Order No. 2000-36 which would reflect the adoption of Order No. 2001-352 and allow the discharge of brine from reverse osmosis processes (RO brine) from CWRF to the EOO.

4. The RWD states that in order to produce a tertiary effluent with a maximum total dissolved solids concentration of 1,000 mg/L, CWRF will treat a portion of the secondary effluent diverted from EWPCF via microfiltration or ultrafiltration (MF/UF) followed by reverse osmosis membrane filtration (RO). MF/UF backwash, along with other backwash from other CWRF processes, will be returned to EWPCF for treatment. Waste brine from the RO process will be directed to the EOO without further treatment.

5. The RWD states that CWRF operations will not result in any additional mass emission of pollutants through the EOO because CWRF is skimming and treating secondary effluent from EWPCF which otherwise would have been discharged through the EOO directly.

6. The RWD states that CWRF operations will result in a reduction of the effluent flowrate discharged through the EOO of up to 4 MGD.

7. The RWD states that the operation of CWRF at the projected 4 MGD will result in an increase in the concentrations of dissolved constituents discharged through the EOO of up to approximately six percent of current concentrations. The RWD reports that the projected higher concentrations are still in compliance with effluent limitations established in Order No. 2000-36.

8. The effluent limitations contained in Order No. 2000-36 were calculated using a minimum initial dilution factor (DF) of 200, as determined by the State Water Resources Control Board, to allow a discharge of up to 38 MGD through the EOO. The Regional Board determined that the increase in dissolved constituent concentrations described in Finding No. 7 will result in a negligible increase in effluent density and will have a negligible effect on the previously calculated DF. A report from EWA dated May 30, 1996, reported that a reduction in the discharge flowrate from 38 MGD to 30 MGD would result in a less stringent DF of 216. Maintaining the DF at 200, in light of the proposed reduction in discharge flowrates through the EOO, will therefore be more protective of water quality and will not require recalculation of the effluent limitations. EWA has not requested modification of the effluent limitations contained in Order No. 2000-36.

9. The RWD states that the RO brine will be discharged through a line that connects to the EOO prior to the effluent sampling station located at the EWPCF. The sampling station provides access for monitoring the total combined effluent discharged through the EOO.

10. The issuance of this Addendum is exempt from the requirements for preparation of environmental documents under the California Environmental Quality Act in accordance with Section 13389 of the Porter Cologne Water Quality Control Act.

11. This Regional Board has considered all environmental factors associated with the proposed and existing discharges.

12. This Regional Board has notified the Encina Wastewater Authority and all known interested parties of its intent to modify Order No. 2000-36 by revising the Findings of Order No. 2000-36 to reflect the adoption of Order No. 2001-352 and by revising the Discharge Specifications

of Order No. 2000-36 to allow the discharge of excess recycled water and reverse osmosis waste brine from the CWRF to the EOO.

13. This Regional Board, in a public hearing, heard and considered all comments pertaining to the modification of Order No. 2000-36.

IT IS HEREBY ORDERED THAT, Order No. 2000-36, NPDES No. CA0107395, is modified as follows:

1. Finding No. 10 is superseded by the following:

"Treated wastewater from five publicly owned treatment facilities is discharged to the Pacific Ocean through the Encina Ocean Outfall (EOO). An additional publicly owned treatment facility is located in the service area of the EOO but is not connected to the EOO. The names and owners of these plants, the current design capacities, the treatment flowrates, and percent capacity used are identified below.

Treatment Facility/Owner	Existing Secondary Treatment Design Capacity* (Mgallons/Day)	1998 Average Monthly Influent Flowrates* (Mgallons/Day)	Percentage of Secondary Design Capacity Used* (%)
Encina WPCF/Encina Joint Powers	36.0	22.9	64
Meadowlark Water Reclamation Plant/Vallecitos Water District	2.25	2.0	89
Shadowridge Water Reclamation Plant/Buena Sanitation District	1.16	0.6	52
Gafner Water Reclamation Plant/Leucadia County Water District	1.0***	0.0	0

Treatment Facility/Owner	Existing Secondary Treatment Design Capacity* (Mgallons/Day)	1998 Average Monthly Influent Flowrates* (Mgallons/Day)	Percentage of Secondary Design Capacity Used* (%)
Carlsbad Water Recycling Facility/Carlsbad Municipal Water District	4.0 ***	N/A	0
Lake Calavera Hills (LCH) Water Reclamation Plant/City of Carlsbad**	1.2	0.0	0
TOTAL (not including LCH Water Reclamation Plant)	**39.41**	**25.5**	**65**

* Average dry-weather flowrate (May through September).

** Lake Calavera Hills Water Reclamation Plant is not operational at present. The Lake Calavera Hills Water Reclamation Plant is located in the service area of the Encina Ocean Outfall, but currently has no interconnection with the Encina WPCF or the Encina Ocean Outfall. Although the Carlsbad City Council has approved dismantling this facility as part of their Water Reclamation Master Plan, the plant has not been dismantled.

The Meadowlark, Shadowridge, and Gafner plants were all intended to function as "skimming" water reclamation facilities, meaning these facilities “skim” or extract from the wastewater collection system only as much raw wastewater as is needed for reclamation purposes. Wastewater not skimmed by the reclamation plants flows to the Encina WPCF for treatment. The Carlsbad plant is intended to skim secondary effluent treated at the Encina WPCF. Wastewater skimmed and treated at the reclamation plants, but not reclaimed, can be discharged via land outfalls directly to the ocean through the Encina Ocean Outfall without entering the Encina WPCF. Brine wastewater from the reclamation facilities is discharged directly to the Encina Ocean Outfall via land outfalls (Failsafe Lines). The effluent sampling station located at the Encina WPCF provides access for monitoring the combined effluent from all Failsafe Lines and the Encina WPCF.

The Gafner WRP is no longer connected to either the sewer system or to the EOO via a land outfall, and therefore no longer operates as a skimming facility.

*** Tertiary treatment design capacity."

2. New Finding No. 16 is added as follows, and old Findings No. 16 through 43 are renumbered as Finding No. 17 through 44.

   "The Carlsbad Water Recycling Facility (CWRF) is located at 6220 Avenida Encinas in the City of Carlsbad adjacent to the Encina WPCF. This Regional Board's Order No. 2001-352 establishes waste discharge requirements for reuse of effluent from the CWRF. A portion of secondary effluent flows from Encina WPCF, which would otherwise be discharged directly to the EOO, will be diverted to CWRF to produce up to 4 million gallons per day of recycled water for reuse in the Carlsbad Municipal Water District service area. The treatment unit operations and processes at CWRF will consist of continuous backwash granulated media filtration, microfiltration or ultrafiltration (MF/UF), reverse osmosis (RO) membrane filtration, chlorine disinfection, and solids thickening. MF/UF backwash, along with other backwash from other CWRF processes, will be thickened and returned to Encina WPCF for treatment and disposal. Up to 0.2 million gallons per day of waste brine from the RO process will be discharged directly to the ocean through the EOO. Excess recycled water produced at CWRF but not reused will be discharged directly to the ocean through the EOO without entering the Encina WPCF."

3. The first paragraph of Discharge Specifications B.1 is replaced by the following:

   "The following effluent limitations apply to the combined wastewater effluent and brine wastewater discharged from the Encina Water Pollution Control Facility, the Meadowlark Water Reclamation Facility, the Shadowridge Water Reclamation Facility, the Gafner Water Reclamation Facility, and the Carlsbad Water Recycling Facility through the Encina Ocean Outfall."

I, John H. Robertus, Executive Officer, do certify that the foregoing is a full, true, and correct copy of Addendum No. 2 to Order No. 2000-36, adopted by the California Regional Water Quality Control Board, San Diego Region, on June 11, 2003.

TENTATIVE

_____

JOHN H. ROBERTUS
Executive Officer
June 11, 2003